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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/718,234

11/20/2003

Kronung Stefan

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40879

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AUTOLIV ASP
3350 AIRPORT ROAD
OGDEN, UT 84405

EXAMINER

CULBRETH, ERIC D

ART UNIT

PAPER NUMBER

3616

DATE MAILED: 03/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/718,234

Applicant(s)

STEFAN ET AL.

Examiner

Eric Culbreth

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 November 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
- Paper No(s)/Mail Date 11/20/03.

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

1. The status inquiry of 5/17/05 is acknowledged. Following is a First Action on the merits of the case. It is noted that the Office currently does not make examiners aware that a Status Inquiry has been filed.

Information Disclosure Statement

2. The information disclosure statement filed 11/20/03 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to regarding foreign documents therein has not been considered.

Drawings

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the air reservoir (claim 6), pyrotechnic device raising and lowering the vehicle (claim 7, 16-18 and claim 22-23), actuating a vehicle suspension device to raise the vehicle body (claim 9), and a vehicle height sensor (claim 11) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended

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replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

4. The abstract of the disclosure is objected to because in line 4 of the abstract, "predefine" should be "predefined". Correction is required. See MPEP § 608.01(b).
5. The disclosure is objected to because of the following informalities: In paragraph [0025], line 8 "H1," should be "H1;".

Appropriate correction is required.

6. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: There is no support in the specification for an air reservoir (claim 6) nor a pyrotechnic device lowering the vehicle (claim 7), nor actuating the suspension to raise or lower the body (claims 7 and 9), nor a vehicle height sensor (claim 11), nor raising the vehicle suspension device proximate to each road wheel adjacent a downhill side of the incline.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. Claims 1-23 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Throughout the invention, it would not appear to be effective to prevent rollover. Specifically, deflating the bladder on the wheel that is leaving the road in a rollover when imminent rollover is detected would not appear to prevent rollover (i.e., that wheel or wheels is/are rapidly leaving the road or may have already left the road in an imminent rollover (i.e., if the car is on two wheels); hence, deflating the suspension

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on that wheel will have no effect in prevent rollover). Regarding claim 7 it is not clear (or even mentioned in the disclosure) how a pyrotechnic device can be used to lower the vehicle body.

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claims 1-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- a. In claim 1, lines 3-4 there is no clear antecedent basis for "the vehicle's road wheels" (i.e., the vehicle could have endless tracks or one wheel).
- b. In claim 1, line 4 "predefine" should be "predefined".
- c. In claim 1, line 8 there is no clear antecedent basis for "the body of the vehicle".
- d. In claim 1, line 8 "counteract" should be one word.
- e. Throughout claim 5 there is no antecedent basis for "the diaphragm actuated release valve" (that was recited in claim 4, and claim 5 depends from claim 2).
- f. In claim 9, line 8 there is no antecedent basis for "the vehicle body".
- g. In claim 14, there is no antecedent basis for "the vehicle suspension device proximate to the front road wheel...".
- h. In claim 16 there is no antecedent basis again for "the vehicle suspension device proximate to the front road wheel...".

- i. In claim 18, there is no antecedent basis for “the bladder”.
- j. In claim 20 there is no clear antecedent basis for “each road wheel of the vehicle adjacent an uphill side of the incline”.
- k. In claim 21 there is no antecedent basis for the vehicle suspension device proximate to each road wheel...”.
- l. In claim 22, there is no antecedent basis for “the vehicle suspension device proximate to each road wheel...”.
- m. In claim 9, line 6 there is no clear antecedent basis for “the type”.
- n. Claims 16-18 are indefinite because they depend from claim 14. Claim 14 is one embodiment in which the suspension device is lowered where the body is raised by vehicle roll. Claims 16-18 are drawn to the embodiment where the suspension that is lowered by vehicle roll is raised. These do not occur in the same embodiment of the invention as disclosed.

Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

12. Claims 1 and 8 as best understood are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Bayley US006182783B1.

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

15. Claims 2-3 and 5-6 as best understood are rejected under 35 U.S.C. 103(a) as being unpatentable over Bayley in view of Kwack et al US006157879A.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Bayley at column 2, lines 55-64 (a system that raises and lowers the body 14) to include air bladders for the suspension devices for raising and lowering the body as taught by Kwack et al (note bladders illustrated at 30 in Figure 2; air is notoriously used as a fluid for conventional suspensions such as Bayley's and

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Kwack et al's) in order to conventionally contain damping fluid at each wheel (claim 2). Similarly, Bayley teaches introducing and releasing fluid to the struts 52, 54 in order to raise and lower the vehicle body center of gravity, and valves such as those taught at Kwack et al, column 1, lines 37-45 would be obvious to use to release fluid (claim 3). In view of the indefinite recitation of claim 5 (lack of antecedent basis), Bayley and Kwack et al meet the positive limitations of the claim. Similarly, in view of the lack of antecedent basis in the specification for the air reservoir in claim 6, Bayley and Kwack et al meet the positive limitations of the claim.

16. Claims 9-11 as best understood are rejected under 35 U.S.C. 103(a) as being unpatentable over Bayley in view of van der Pol et al US006397133B1.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Bayley, who already senses angular roll rate as a parameter to determine rollover at column 3, lines 7-16 and then lowers the vehicle body, to include a system determining the type of rollover condition based on the parameter in view of van der Pol et al (Figures 5-6 and column 8, line 23 – column 10, line 8, where it is determined whether it is a side rollover or longitudinal rollover) in order to protect against different types of rollover that might occur (claims 9-10). Bayley, in sensing pitch at column 3, lines 7-16, senses a vehicle body height with respect to a road surface (claim 11).

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17. Claims 12-16, and 19-23 as best understood are rejected under 35 U.S.C. 103(a) as being unpatentable over Bayley in view of van der Pol et al as applied to claim 9 above, and further in view of Shiino et al US006711482B2.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Bayley and van der Pol et al to include a system that measures lateral acceleration in determining rollover conditions as taught by Shiino et al (see Figure 6, S101) in order to predict rollover, especially in view of Bayley's disclosure at column 3, lines 10-11 that one or more vehicle dynamics "such as" pitch, yaw etc. may be used to determine rollover conditions (claim 12). In determining lateral acceleration, the system would determine if the vehicle is in a curve in the road inasmuch as applicant's invention (claim 13). When Bayley lowers the vehicle body by lowering all the suspension devices (column 3, lines 36-38), this would include lowering the suspension at the front road wheel on the raised side by releasing a fluid (claims 14-15). In the combination, as seen in Figure 6 of van der Pol et al, it is determined whether the vehicle is on an incline (claim 19), and in the combination when Bayley lowers the center of gravity, this would include lowering the suspension devices adjacent the uphill side of the incline by releasing fluid (claims 20-21). In view of the indefinite recitations (lack of antecedent basis) in claims 16 and 22-23, the positive limitations of the claims are met.

Allowable Subject Matter

18. Claims 4, 7 and 17-18 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Schubert et al US006542792B2, Watson et al US006529811B2, Brown et al US006332104B1.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Culbreth whose telephone number is 571/272-6668. The examiner can normally be reached on Monday-Thursday, 9:00-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Dickson can be reached on 571/272-6669. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Eric Culbreth
Primary Examiner
Art Unit 3616

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